YUKON ENVIRONMENTAL STATISTICS

LAND

	Area (km^2)
Total Area of the Yukon	483,450
Land Area	478,970
Forest Area	281,030
Non-Forest Area	197,940
Freshwater Area	4,480

Agricultural Lands	Area (km^2)
Agricultural Potential	7,500
Suitable for grains and horticulture	300
Cultivated	35

Soil Types

Permafrost-Affected Soils
Brown Forest Soils
Wetland Soils
Grassland Soils
Rockland Soils
Flood Plain (Alluvial Soils)

Mountains (St. Elias Range)

Name	Height (m)
Mount Logan	5,959
Mount St. Elias	5,489
Mount Lucania	5,226
King Peak	5,173
Mount Steele	5,067
Mount Wood	4,838
Mount Vancouver	4,785
Mount Macaulay	4,663
Mount Slaggard	4,663
Mount Hubbard	4,577

NATIONAL PARKS

Name	Established	Area (km^2)	Location
Kluane National Park and Reserve	1972	22,015	Southwest corner
Ivvavik National Park* (formerly Northern Yukon)	1984	10,170	Northwest corner
Vuntut National Park*	1994	4,387	Northwest corner
Territorial Parks			
Herschel Island Territorial Park	1987	116	Off the Arctic Coast

Coal River Springs Ecological Reserve	1990	16	East of Watson Lake
Fishing Branch Ecological Reserve	1995	165	North of Dawson South of Old Crow
Protected Areas and Sanctuaries			
Old Crow Flats - Special Management Area*	1995	7,785	North of Old Crow
Nisutlin River Delta - National Wildlife Area*	1995	53	North of Teslin
Horseshoe Slough - Habitat Protection Area*	1995	79	Stewart Crossing
Kluane Wildlife Sanctuary	1943	6,450	North of Kluane Park
McArthur Wildlife Sanctuary	1948	1,700	South of Mayo
Heritage Sites			
Sha'wa She (Dalton Post)*	1995		South of Haines Junction
Rampart House*	1995		West of Old Crow
La Pierre House*	1995		East of Old Crow North of Eagle Plaines
Bonnet Plume River*	1995		Northwest of Mayo
Tatshenshini River*	1995		South of Haines Junction
Thirty Mile River	1991		Section of Yukon River North of Lake Laberge

* Many protected areas were created as a result of land claim settlements

AIR

Wind Speed (km/h)

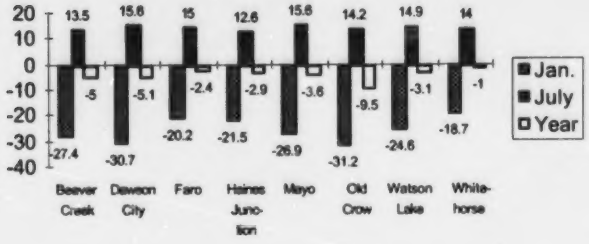
Location	Average Annual	Extreme Average Annual	Extreme Average*	Prevailing Direction
Beaver Creek	3.2	16	29	northwest
Dawson City	3.0	19	51	east
Faro	7.9	28	40	southeast
Mayo	6.3	28	72	north
Old Crow	8.0	30	-	northeast
Watson Lake	8.5	36	80	west
Whitehorse	14.1	44	72	south/southeast

* Extreme average wind speed for a 2 minute interval

Temperature (Celsius)

	30 Year Average			Extreme	
Location	Jan.	July	Year	High	Low
Beaver Creek	-27.4	13.5	-5.0	32.8	-55.0
Dawson City	-30.7	15.6	-5.1	35.0	-58.3
Faro	-20.2	15.0	-2.4	32.8	-55.0
Haines Junction	-21.5	12.6	-2.9	32.8	-53.9
Mayo	-26.9	15.6	-3.6	36.1	-62.2
Old Crow	-31.2	14.2	-9.5	32.8	-59.4
Watson Lake	-24.6	14.9	-3.1	34.2	-58.9
Whitehorse	-18.7	14.0	-1.0	34.4	-52.2

Average Temperature (Celcius)



Beginning, End and Duration of Summer and Winter

Location	Average Date of Summer*		Average Date of Winter**		Average Duration of Days	
	Start	End	Start	End	Summer	Winter
Beaver Creek	-	-	Sept. 29	Apr. 24	-	207
Dawson City	May 16	Sept. 1	Oct. 10	Apr. 17	109	197
Faro	May 26	Aug. 31	Oct. 4	Apr. 17	98	195
Haines Junction	June 1	Aug. 29	Oct. 14	Apr. 21	90	189
Mayo	May 24	Sept. 4	Oct. 8	Apr. 17	104	191
Old Crow	May 29	Aug. 28	Sept. 23	May 13	91	232
Watson Lake	May 24	Sept. 15	Oct. 19	Apr. 16	109	179
Whitehorse	May 24	Sept. 8	Oct. 18	Apr. 15	108	179

* the period when the mean daily temperature is above 8° C.
** the period when the mean daily temperature is below 0° C.

Frost (Averages)

Location	Frost-Free Period (Days)	Last Frost (Spring)	First Frost (Fall)	# of Years Recorded
Beaver Creek	50	June 22	Aug. 12	9
Dawson City	91	May 28	Aug. 28	29
Faro	90	May 27	Aug. 26	8
Haines Junction	21	July 6	July 26	30
Mayo	71	June 8	Aug. 19	29
Old Crow	63	June 14	Aug. 17	9
Watson Lake	93	June 2	Sept. 4	29
Whitehorse	82	June 8	Aug. 30	29

Average Relative Humidity (%) for Selected Hours (LST)*

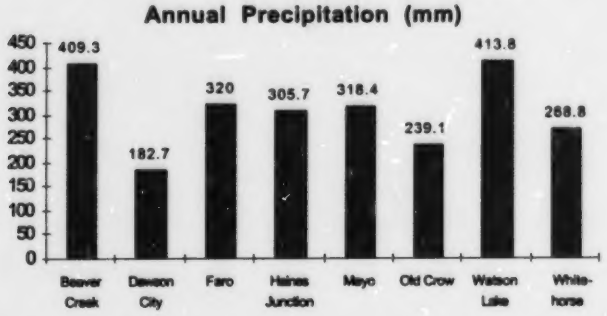
Location	Time	June	Dec.	Annual
Burwash	06:00	75	80	78
	15:00	46	78	64
Dawson City	06:00	75	81	83
	15:00	44	81	66
Mayo	06:00	75	84	81
	15:00	44	82	64
Watson Lake	06:00	70	76	78
	15:00	42	75	60
Whitehorse	06:00	70	76	75
	15:00	40	75	56

* Between 1961-1990; Local Standard Time

Annual Precipitation (Ten Year Running Average)

Location	Annual Precip. (mm)	% Rain	% Snow
Beaver Creek	409.3	69	31
Dawson City	182.7	61	39
Faro	320.0	67	33
Haines Junction	305.7	50	50
Mayo	318.4	63	37
Old Crow	239.1	54	46
Watson Lake	413.8	62	38
Whitehorse	268.8	59	41

*Annual precipitation in water equivalent terms.



WATER

Yukon Lakes

Lake	Size (km^2)
Aishihik	135
Bennett	93
Dezadeash	83
Frances	98
Kluane	306
Kusawa	140
Laberge	214
Little Salmon	62
Marsh	101
Mayo	90
Tagish	355
Teslin	381
Wellesley	74
Wolf	74

Yukon Rivers: Selected Locations

Annual Average Discharge by Volume: Cubic Meters/Second (m^3/s)

River	Location	(m^3/s)	Second Location	(m^3/s)
Dezadeash	Haines Junction	42		
Pelly	Pelly Crossing	389	Ross River	187
Porcupine	Old Crow	319		
Ross	Ross River	66		
Stewart	Mayo	370	Stewart Crossing	415
Yukon	Carmacks	747	Dawson	2,210
Yukon	Whitehorse	240		

PLANTS AND ANIMALS

Distribution of Mammals and Population Estimates

There are 46 mammal species in the Yukon. The following is a list of some larger species found in the Yukon.

Mammal	Pop. Estimate	Distribution in the Yukon
Arctic Fox	50	northern Yukon
Black Bear	10,000	south and central Yukon
Caribou	273,000-282,000	entire Yukon
a. Woodland	30,000-35,000	southern and central Yukon
b. Barren-Ground	245,000	northern and westernYukon
Deer	500	southern Yukon
Elk	100	south central Yukon
Grizzly Bear	6,000-7,000	entire Yukon
Moose	55,000	entire Yukon

Mountain Goat	2,000	southern Yukon
Muskoxen	80	northern Yukon
Thinhorn Sheep	22,000	southern and central Yukon
a. Dall Sheep	19,000	southwest Yukon
b. Stone Sheep	3,000	southern and central Yukon
Wolves	4,500	entire Yukon
Wood Bison	230	west central Yukon

Total Fur Harvest by Season

Species	1991-92	1992-93	1993-94	1994-95	1995-96
Beaver	339	308	523	381	568
Coyote	65	67	30	57	29
Fisher	2	1	1	2	5
Fox -Coloured	162	65	85	97	45
Fox - Arctic	-	1	-	-	3
Lynx	1,405	529	100	187	152
Marten	5,045	1,691	2,353	3,977	3,723
Mink	255	52	53	80	76
Muskrat	590	260	144	279	3,054
Otter	5	5	8	11	23
Squirrel	408	1,488	1,759	1,807	1,075
Weasel	113	62	173	107	143
Wolf	139	180	104	158	104
Wolverine	218	176	117	145	72

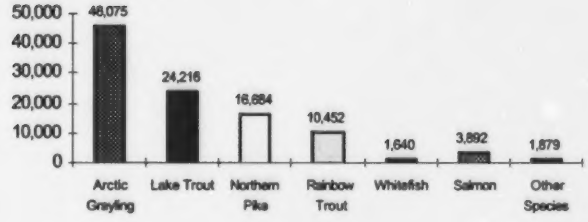
Hunting Licenses

	1995-96	1994-95	1993-94	1992-93	1991-92
Yukon Resident -Big Game	3,699	3,753	3,887	3,888	4,009
Non-Yukon Canadian Residents - Big Game	29	33	48	38	30
Non-Resident Alien -Big Game	575	502	485	519	506
Yukon Resident -Small Game	220	207	189	178	229
Non-Yukon Resident -Small Game	253	198	180	221	244
Total	4,776	4,693	4,789	4,844	5,018

Fish Species Retained by Sport Anglers (1990)

Fish Species	Yukon Resident	Non-Yukon Canadian Resident	Resident of Other Countries	Total
Arctic Char	64	104	0	168
Arctic Grayling	26,194	8,489	11,392	46,075
Chinook Salmon	968	52	211	1,231
Coho Salmon	407	0	155	562
Lake Trout	14,708	3,130	6,378	24,216
Northern Pike	11,824	891	3,969	16,684
Rainbow Trout	6,839	2,093	1,520	10,452
Sockeye Salmon	2,035	35	29	2,099
Whitefish	844	551	245	1,640
Other Species	681	121	1,077	1,879
Total	64,564	15,466	24,976	105,006

Total of Fish Species Retained by Sport Anglers (1990)



Angling Licenses

	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Yukon Residents	8,503	8,352	8,158	8,301	7,911	8,318
Non-Yukon Canadian Residents	3,746	3,214	3,776	3,599	3,385	3,779
Residents of Other Countries	4,692	4,319	4,502	4,824	5,247	5,619
Total	16,941	15,885	16,436	16,724	16,543	17,716

Vegetation

It is estimated that there are over 1,300 plant species in the Yukon. The following is a list of the most common plants found in certain ecological zones of the Yukon.

Plants common on Dry Slopes

Arnica
Bent Grass
Bluejoint
Beardtongue
Comandra
Kinnikinnick
Lupine
Moss
Mountain Juniper
Pasqueflower
Prickly Saxifrage
Sagewort

Plants common in Moderate to Dry Forests

Bluebell
Bluejoint
Bunchberry
Comandra
Fescue Grass
Kinnikinnick
Lichen
Lupine
Moss
Rose
Service-berry
Twinflower
White Camass

Plants common in Wet Forests and Heath

Alpine Blueberry
Anemone
Chickweed
Cloudberry
Crowberry
Labrador Tea
Lichen
Lingonberry
Moss
Mountain Alder
Polar Grass
Saussura
Shrub Birch
Shrubby Cinquefoil
Sphagnum
Willow
Yarrow

Plants common in Alpine and Dry Tundra

Alpine Azalea
Alpine Bearberry
Anemone
Arnica
Bellflower
Diapensia
Grass
Kobresia
Lapland Cassiope
Lapland Rosebay
Lichen
Lousewort
Mountain Avens
Mountain Heather
Roseroot
Willow

Plants common in Bogs and Tundra

Alpine Blueberry
Bog Rosemary
Butterwort
Cloudberry
Coltsfoot
Cottongrass
Cranberry
Crowberry
Labrador Tea
Lingonberry
Moss
Sedge
Shrub Birch
Sphagnum

Classification of Forest Land

Inventoried Area Class	Area(1000's HA)
Productive (able to produce saleable stand)	7,470
Reserved (not available for harvesting)	73
Non-reserved (available for harvesting)	7,397
Stocked (land supporting tree growth)	6,488
Fully	2,733
Partially	2,828
Unquantified	927
Nonstocked	909
Unproductive (unable to produce saleable stand)	20,021
Unspecified Productivity	58

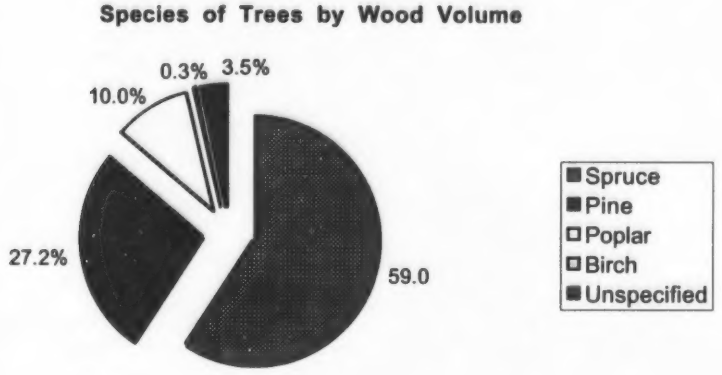
Age Class of Trees by Wood Volume

Class	cubic meters
Immature	292,000,000
Mature	312,000,000
Over Mature	28,000,000

Species of Trees by Wood Volume

Coniferous	Volume*	Deciduous	Volume*
Spruce	374	Poplar	63
Pine	172	Birch	2
Unspecified	22	Unspecified	0
Total	568	Total	65

* in millions of cubic meters, total may not add up due to rounding



Area of Harvested Forest Lands

Year	Harvest (hectares)
1994	2,056e
1993	634e
1992	639e
1991	350e
1990	366e
1989	1,554

e = estimate

Forest Fires

Year	1996	1995	1994	1993	1992	1991
Number	147	148	106	136	116	187
Area (hectares)	93,351.05	217,645.15	415,689.26	86,115.96	30,123.33	132,729.44

PROTECTING THE ENVIRONMENT

RECYCLING

Month 1995	Items in tonnes						Items by amount		
	Glass[1]	Aluminum Cans	O.C.C. [2]	Plastic	Fine Paper[3]	Newsprint	Liquor Glass	Aluminum Cans	Refillable Beer Bottles
April	27.24	8.52	16.56	-	4.91	1.08	51,893	558,589	214,097
May	14.40	9.79	18.93	1.46	5.45	3.02	61,902	594,909	168,418
June	7.19	9.12	9.91	0.22	5.97	2.07	65,705	631,111	176,725
July	9.44	4.49	11.11	0.69	4.15	1.07	71,712	746,822	219,251
Aug.	19.98	8.38	16.08	0.25	5.19	3.18	70,724	674,913	228,840
Sept.	23.73	14.08	19.46	3.01	7.30	2.04	68,547	588,539	164,798
Oct.	7.36	9.58	8.71	0.32	5.08	3.08	58,084	590,144	181,923
Nov.	5.73	5.78	9.86	2.62	6.21	2.07	43,764	371,588	123,294
Dec.[4]	64.90	11.84	55.75	13.70	11.27	4.90	39,529	292,606	126,626
1996									
Jan.	11.77	5.25	6.13	0.77	5.93	1.72	39,259	275,903	78,357
Feb.	23.55	6.40	14.63	1.59	8.68	2.43	46,357	353,020	175,822
March	16.82	7.34	13.77	1.39	6.28	3.59	45,497	417,983	116,703
Year End Adjustments	152.87	-1.89	-1.98	-	2.43	3.00	-	-	-

1 Glass - Household and Liquor
2 O.C.C. - Old Corrugated Cardboard
3 Fine Paper - Both White and Coloured
4 December figure is adjusted as well as year end adjustments for tonnes

AIR AND WATER QUALITY

Air Quality

Because of the low population and small number of major industries, air quality in the Yukon is generally excellent. The most common concern is woodsmoke. Many Yukon homes are heated with wood.

The national guideline for what is defined as 'acceptable' air quality prescribes a maximum of 120 micrograms per cubic meter measured as a 24 hour average.

The subdivision of Riverdale in Whitehorse has, during episodes of winter thermal inversions, recorded some of the highest levels of air borne particles in North America. Riverdale particulate levels have been as high as 700 micrograms per cubic meter of air. During the periods when woodsmoke levels could become severe, the City's bylaw office can order that woodburing stop.

A portion of the Woodsmoke bylaw also applies to individual plumes of smoke from woodstoves or woodburning (includes open burning i.e. cleared materials, brush) anywhere in Whitehorse. An individual cannot allow a plume of smoke to exceed 50% opacity for more than 15 minutes or it is in violation. Also, under consideration is a requirement that all new (solid wood) woodstove installations must meet emissions standards. Whitehorse may become one of the few municipalities in Canada with such a requirement.

Council is now reviewing a policy calling Riverdale No-burns at lower levels i.e. working towards improved air quality conditions.

Non-woodburning periods in Riverdale:

Year	No. of periods	
	Voluntary	Mandatory
1996	-	0
1995	-	1
1994	-	3
1993	-	2
1992	-	2
1991	-	5
1990	1	0
1989	0	4

Air Emissions

Carbon Monoxide (parts per million)
- Mean from October 1989 to April 1990 was 1.13 ppm
- Mean from November 1990 to May 1991 was 1.11 ppm
- National Air Quality Objective for maximum desirable level[1] for average concentration over an eight hour period is 5 ppm

Nitrogen Dioxide (parts per billion)
- Mean from October 1989 to April 1990 was 19.29 ppb
- Mean from December 1990 to May 1991 was 23.67 ppb
- National Air Quality Objective for maximum acceptable level[2] for annual arithmetic mean is 0.05 ppm (50 ppb)

Total Suspended Particulates (micrograms per cubic meter)
- Annual Geometric Mean in 1989 32 $\mu g/m^3$
- Annual Geometric Mean in 1990 was 28 $\mu g/m^3$

- Annual Geometric Mean in 1994 was 19.2 $\mu g/m^3$
- National Air Quality Objective for maximum desirable level[1] for annual geometric mean is 60 $\mu g/m^3$

1. The maximum desirable level defines the long term goal for air quality and provides the basis for an anti-degradation policy for the unpolluted parts of the country.

2. The maximum acceptable level is intended to provide adequate protection against adverse effects on soil, water, vegetation, materials, animals, visibility, personal comfort and well being.

Water Quality
Survey of drinking water quality, 1993

Bacteria and pathogens
Total and faecal coliform analyses showed good quality at most sites. Communities with holding tanks or with private wells subject to contamination from septic fields were more liable to have bacteria in the samples. Piped water systems (which are chlorinated) were all of good quality bacteriologically.

Yukon municipal water supplies

Community	Surface Water	Community Wells	Private Wells
Beaver Creek			•
Burwash Landing		•	•
Carcross	•	•	
Carmacks		•	•
Dawson City		•	
Destruction Bay			•
Elsa		•	
Faro		•	
Haines Junction		•	
Keno City		•	
Mayo		•	
Old Crow		•	
Pelly Crossing		•	•
Ross River		•	
Swift River		•	
Tagish		•	•
Teslin		•	
Upper Liard		•	•
Watson Lake		•	•
Whitehorse	•	•	•

Drinking water supplies tested:	Drinking water quality met all guidelines with these exceptions:
Beaver Creek	-
Burwash Landing	manganese (0.07 mg/L)
Carcross	manganese (0.09 mg/L)
Carmacks	manganese (0.26 mg/L)
Champagne	iron (0.77 mg/L)
Canyon Creek	-
Dawson City	-
Destruction Bay	sulphide (0.21 mg/L
Faro	-

Haines Junction	-
Mayo	-
Old Crow	manganese (0.17 mg/L)
Pelly Crossing	manganese (0.21 mg/L)
Ross River	manganese (0.08 mg/L)
Tagish	turbidity (9 NTU)
Teslin	-
Watson Lake	manganese (0.09 mg/L)
Whitehorse	-

Relevant Canadian drinking water standards

iron	0.3 mg/L
manganese	0.05 mg/L
sulphide	0.05 mg/L
turbidity	5 NTU

NTU = nephelometer turbidity units; mg/L = milligrams per litre.

Drinking water guidelines for iron, manganese, sulphide and turbidity are all related to taste, colour, smell or scaling properties of the water, and not to health risks.

Sewage Treatment Facts

Municipal sewage in the Yukon is treated before it is released into the environment. Most Yukon communities use lagoon systems, which settle our solids and begin the bacterial breakdown of organic matter. Other methods include the mechanical screening system in Dawson and the extended aeration plant in Carmacks. Some smaller communities rely on private septic systems or community septic pits.

Some of the Yukon's sewage treatment systems are new and efficient and have little or no impact on water. For example, the large lagoon systems at Mayo and Watson Lake have no discharges to surface waters. Other sewage treatment systems, such as Dawson and Whitehorse, require upgrading. Whitehorse, Carmacks and Dawson are the only communities discharging sewage continuously into surface waters. Sewage from other communities, such as Haines Junction, Destruction Bay and Faro, is stored in large lagoons and periodically discharged to the environment.

Yukon municipal sewage treatment systems

Community	Sewage Treatment Type				
	lagoons	aeration	screening	septic	pump-out
Beaver Creek				•	•
Burwash Landing				•	•
Carcross				•	•
Carmacks		•			•
Dawson City			•		
Destruction Bay	•				
Faro	•				
Haines Junction	•				
Keno City				•	
Mayo	•				
Old Crow	•				•
Pelly Crossing				•	•
Ross River				•	•
Tagish				•	•

Teslin	•		•
Upper Liard		•	
Watson Lake	•		
Whitehorse	•	•	

Sources

- Yukon State of the Environment Report, 1995
- Canada Year Book, 1997
- Renewable Resources (Agriculture Branch) (Environment Protection and Assessment Branch) (Fisheries Management) (Habitat Management) (Parks and Outdoor Recreation) (Wildlife Management)
- Yukon Weather Centre
- Department of Indian Affairs and Northern Development (Forest Resources)
- City of Whitehorse (Woodsmoke Inspector)
- Raven Recycling Centre

Contacts

For further information, contact:

The Yukon Government
Bureau of Statistics
Box 2703
Whitehorse, Yukon
Y1A 2C6
Telephone: (867)667-5640
Fax: (867)393-6203

Yukon residents outside Whitehorse can call 1-800-661-0408 (toll free)

Additional Information

The Yukon Environmental Fact Sheet is a publication of the Yukon Bureau of Statistics. To receive information about other Bureau publications, please complete the following form and forward it to the Bureau's address listed above.

Name:_____

Company (if applicable):_____

Address:_____

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